What is claimed is:

1. An apparatus for processing sample materials, the apparatus comprising:

a platform comprising an upper surface and a lower surface;

a plurality of stationary fluid chambers opening at the upper surface of the platform;

retention structure occupying a portion of the upper surface of the platform, wherein the retention structure is capable of retaining a rotating multi-chambered processing device proximate the upper surface of the platform.

2. An apparatus according to claim 1, further comprising a spindle opening formed through the upper and lower surfaces of the platform, the spindle opening located within the retention structure, whereby a spindle is capable of contacting and rotating the multi-chambered processing device proximate the upper surface of the platform.

3. An apparatus according to claim 1, wherein the retention structure comprises a cavity formed in the upper surface of the platform.

4. An apparatus according to claim 3, wherein the cavity is circular.

5. An apparatus according to claim 1, wherein the plurality of stationary fluid chambers are arranged in a rectilinear array on the upper surface of the platform.

6. An apparatus according to claim 1, wherein at least some of the plurality of stationary fluid chambers further comprise filter material.

7. An apparatus according to claim 6, wherein the fluid chambers comprising filter material further comprise a drain port opening at the lower surface of the platform.

8. An apparatus according to claim 7, wherein each of the drain ports comprises a drain extension.

9. An apparatus for processing sample materials, the apparatus comprising:

a platform comprising an upper surface and a lower surface;

a plurality of stationary fluid chambers opening at the upper surface of the platform;

retention structure occupying a portion of the upper surface of the platform; and

a processing device located within the retention structure proximate the upper surface of the platform, the processing device comprising a plurality of process chambers, wherein the processing device is capable of being rotated within the retention structure to move the plurality process chambers.

10. An apparatus according to claim 9, further comprising a spindle opening formed through the upper and lower surfaces of the platform, the spindle opening located within the retention structure, whereby a spindle is capable of contacting and rotating the processing device proximate the upper surface of the platform.

11. An apparatus according to claim 9, wherein the plurality of stationary fluid chambers are arranged in a rectilinear array on the upper surface of the platform.

12. An apparatus according to claim 11, wherein at least one of the process chambers on the processing device is positioned at a transfer site proximate the upper surface of the platform, wherein the location of the transfer site is fixed relative to the stationary fluid chambers.

13. An apparatus according to claim 12, further comprising complementary registration structure on the platform and the processing device, the complementary registration structure aligning the at least one process chamber at

the location defined by the rectilinear array of the stationary fluid chambers when the processing device is stationary.

14. An apparatus according to claim 9, wherein the retention structure comprises a cavity formed in the upper surface of the platform.

15. An apparatus according to claim 14, wherein the cavity is circular.

16. An apparatus according to claim 9, wherein at least some of the plurality of stationary fluid chambers further comprise filter material.

17. An apparatus according to claim 16, wherein the fluid chambers comprising filter material further comprise a drain port opening at the lower surface of the platform.

18. An apparatus according to claim 17, wherein each of the drain ports comprises a drain extension.

19. An apparatus according to claim 17, further comprising a vacuum manifold.

20. An apparatus according to claim 9, wherein the processing device is captive within the retention structure on the platform.

21. A method of processing sample material, the method comprising:

providing a platform comprising an upper surface and a lower surface, a plurality of stationary fluid chambers opening at the upper surface of the platform, and retention structure occupying a portion of the upper surface of the platform;

providing a processing device in the retention structure proximate the upper surface of the platform, the processing device comprising a plurality of process chambers;

providing sample material in a plurality of the plurality of process chambers on the processing device;

delivering energy to the process chambers containing sample material to raise the temperature of the sample materials in the process chambers; and

rotating the processing device about an axis of rotation within the retention structure while delivering the energy, wherein the temperature of the sample materials in the process chambers is controlled as the processing device rotates to process the sample materials.

22. A method according to claim 21, wherein the energy comprises electromagnetic energy.

23. A method according to claim 21, wherein rotating the processing device comprises extending a spindle through a spindle opening formed through the upper and lower surfaces of the platform, the spindle opening located within the retention structure, and rotating the processing device using the spindle.

24. A method according to claim 21, further comprising transferring the sample materials from the process chambers on the processing device to the plurality of stationary fluid chambers on the platform after processing the sample materials.

25. A method according to claim 24, wherein the fluid chambers comprise filter material.

26. A method according to claim 24, further comprising transferring the sample material from the fluid chambers of the platform to a microtiter plate comprising a plurality of wells.

27. A method according to claim 26, wherein transferring the sample materials comprises passing the sample materials in the fluid chambers through drain ports opening at the lower surface of the platform.

28. A method according to claim 27, wherein the fluid chambers comprise filter material, and further wherein passing the sample material through the drain ports comprises passing the sample materials through the filter material in the fluid chambers.

29. A method according to claim 27, wherein the passing of sample material through the drain ports is accomplished using vacuum.

30. A method according to claim 29, wherein the vacuum is delivered by placing the lower surface of the platform on a vacuum manifold and drawing a vacuum between the platform and the vacuum manifold.

31. A method according to claim 21, wherein the plurality of stationary fluid chambers on the platform are arranged in a rectilinear array on the upper surface of the platform.

32. A method according to claim 31, further comprising positioning at least one of the process chambers on the processing device at a transfer site proximate the upper surface of the platform, wherein the location of the transfer site is fixed relative to the stationary fluid chambers.

33. A method according to claim 32, further comprising transferring the sample material from the process chamber located at the transfer site to one of the stationary fluid chambers on the platform after processing the sample materials.

34. A method according to claim 32, wherein the positioning further comprises providing complementary registration structure on the platform and the processing device, the complementary registration structure aligning the at least one process chamber at the transfer site when the processing device is stationary.

35. A method of processing sample material, the method comprising:

providing a platform comprising an upper surface and a lower surface, a plurality of stationary fluid chambers opening at the upper surface of the platform, and retention structure occupying a portion of the upper surface of the platform, wherein the plurality of stationary fluid chambers are arranged in a rectilinear array on the upper surface of the platform;

placing a processing device in the retention structure proximate the upper surface of the platform, the processing device comprising a plurality of process chambers;

positioning at least one of the process chambers on the processing device at a transfer site proximate the upper surface of the platform, wherein the location of the transfer site is fixed relative to the stationary fluid chambers;

loading sample material in a plurality of the plurality of process chambers on the processing device, wherein the process chambers are loaded while positioned at the transfer site;

rotating the processing device about an axis of rotation within the retention structure on a spindle extending through a spindle opening formed through the upper and lower surfaces of the platform;

delivering energy to at least some of the plurality of process chambers containing sample material while rotating the processing device to control the temperature of the sample materials in the process chambers, whereby the sample materials are processed; and

transferring the sample materials from the process chambers on the processing device to the plurality of stationary fluid chambers on the platform after processing the sample materials; where the sample materials in the process chambers are transferred while the process chambers are located at the transfer site.

36. A method according to claim 35, wherein the energy comprises electromagnetic energy.

37. A method according to claim 35, wherein the fluid chambers comprise filter material.

38. A method according to claim 37, further comprising transferring the sample material from the stationary fluid chambers of the platform to a microtiter plate comprising a plurality of wells.

39. A method according to claim 38, wherein the transferring of sample materials from the stationary fluid chambers comprises passing the sample materials in the fluid chambers through drain ports opening at the lower surface of the platform.

40. A method according to claim 39, wherein the fluid chambers comprise filter material, and further wherein passing the sample material through the drain ports comprises passing the sample materials through the filter material in the fluid chambers.

41. A method according to claim 39, wherein the passing of sample material through the drain ports is accomplished using vacuum.

42. A method according to claim 41, wherein the vacuum is delivered by placing the lower surface of the platform on a vacuum manifold and drawing a vacuum between the platform and the vacuum manifold.

43. A method according to claim 35, wherein the positioning further comprises providing complementary registration structure on the platform and the processing device, the complementary registration structure aligning the at least one process chamber at the transfer site when the processing device is stationary.

44. A system for processing sample material, the system comprising:
a workspace comprising a processing station;

at least one platform located within the workspace, each platform comprising an upper surface and a lower surface, a plurality of stationary fluid chambers opening at the upper surface of the platform, and retention structure occupying a portion of the upper surface of the platform;

at least one processing device located within the workspace, each processing device comprising a plurality of process chambers, wherein rotation of the processing device within the retention structure on the platform moves the plurality process chambers in a circular pattern;

a spindle located at the processing station; and

a transfer device operative within the workspace, the transfer device capable of transferring sample material from the processing station to another location within the workspace.

45. A system according to claim 44, wherein the workspace further comprises an unloading station, and further wherein the transfer device transfers sample material by transferring the at least one platform from the processing station to the unloading station.

46. A system according to claim 44, wherein the transfer device is capable of transferring sample material from the at least one processing device to the stationary fluid chambers of the at least one platform.

47. A system according to claim 44, further comprising a plurality of processing devices located within the workspace.

48. A system according to claim 44, further comprising a plurality of platforms located within the workspace.

49. A system according to claim 44, wherein the at least one platform further comprises a spindle opening formed through the upper and lower surfaces of the platform, the spindle opening located within the retention structure, whereby a spindle is capable of contacting and rotating the processing device proximate the

upper surface of the platform when the platform and the processing device are located at the processing station.